

22. The device of Claim 21, wherein said plastic material is selected from the group consisting of polyethylene, polypropylene and polytetrafluoroethylene.

23. The device of Claim 14, wherein the back-up roll has a surface provided with depressions which can receive the cutting edges of the at least one axially extending cross-cutting element or radially extending longitudinal cutting element or both.--

REMARKS

Claims 1 and 3-11 have been cancelled. New Claims 14-23 have been added. Claims 2, 12 and 13 have been withdrawn from consideration by the Examiner. Hence, Claims 14-23 are now active and under consideration in this application. All newly presented Claims are readable upon the provisionally elected invention.

REQUEST FOR RECONSIDERATION

Applicant wishes to thank Examiner Dexter for the recent helpful and courteous discussion conducted with their U.S. representative. In accordance with the remarks made during the discussion, the claims have been amended to clarify the present invention. Now, in conjunction with and in addition to the remarks made during the discussion, Applicant wishes to further distinguish the present invention from the cited references.

In accordance with the present invention, a device is provided for coarse grinding of hydrous polymer gels which permits surprisingly uniform and inexpensive size reduction of soft, viscoplastic, or brittle polymer gels.

In particular, the present invention provides a device for processing a hydrous polymer gel, which contains two rolls which are approximately parallel to and aside each

other and rotating in opposite direction having between them a nip for the passage of the polymer gel, wherein one roll is formed as a cutting roll which is provided with at least one axially extending cross-cutting element having a cutting edge and with a radially extending longitudinal cutting element provided with a cutting edge running around it, and that the other roll is formed as a back-up roll and wherein the width of the nip is variable.

The present device exhibits a variable spatial arrangement regarding the plane of the cutting materials, i.e. the cutting roll and the back-up roll can be arranged axially, vertically and angularly. For example, the angular arrangement may be obtained by alteration of the nip.

Claims 1, 3/1-5/1 and 7/1-9/1 stand rejected under 35 U.S.C. §103(b) as anticipated by Heywood. However, this reference neither discloses nor suggests the present invention.

In particular, this reference merely describe a device for forming binders, fillers and wrappers for cigars. In contrast, the device of the present invention is used for processing a soft and plastic polymer gels with several advantages in that particular field.

First, one important difference between the present invention and the device of Heywood is that in the present invention, the width of the roll gap approximates the height of the at least one axially extending cross-cutting element or radially extending longitudinal cutting element or both. This affords the important advantage that the cutting elements join the back-up roller at least at one point of their rotation, ensuring clean cutting of the polymer gel.

To this end, it is noted that the roll-gap is adjustable so as to meet differing demands, which means that the roll-gap may be dimensioned so that the longitudinal cutter and the cross cutter with the cutting edge can be guided just along the back-up roll without

contracting it. This is why polymer gels, such as band-like gels with a layer thickness in the range of 3-500 mm may be processed. This is clearly not possible for the device of the reference.

Additionally, another important feature of the present invention pertains to the fact that the longitudinal cutter is formed such that its circumferential rate is higher than the conveying rate of the polymer gel.

Thus, one skilled in the art would be neither motivated nor enabled from the reference to practice the present invention.

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Heywood.

However, the comments made above are believed to be applicable to this ground of rejection as well.

Hence, this ground of rejection is believed to be unsustainable and should be withdrawn.

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Heywood in view of Stream. However, the latter reference fails to correct the deficiencies of the former cited reference.

In particular, Stream has merely been cited to show the provision of plastic on an anvil or back-up roll to enable the blade to press through the workpiece with sufficient pressure to cut the workpiece while not dulling the cutting edge of the blade. That is, Stream has been cited to show that plastic coating may be used as a "modern alternative" to the rawhide coating of Heywood.

However, it is believed that Stream fails to correct the deficiencies of Heywood as noted above.

Finally, it is pointed out that the present device is used advantageously for processing of soft and plastic polymer gels wherein the polymer gel pieces may be separated without congestion of the polymer pieces. Attention is directed to an additional figure (Figure attached herewith).

Hence, this ground of rejection is believed to be unsustainable and should be withdrawn.

The specification stands objected to.

However, in view of the above amendments, this ground of rejection is believed to be moot.

Claims 1 and 3/1-11/1 stand rejected under 35 U.S.C. §112, second paragraph.

However, in view of the above amendments, this ground of rejection is believed to be moot.

Finally, attached to this response are proposed drawing changes to Figures 2 and 3 as suggested by the Examiner. Favorable consideration is earnestly solicited.

Accordingly, in view of all of the above amendments and attendant remarks, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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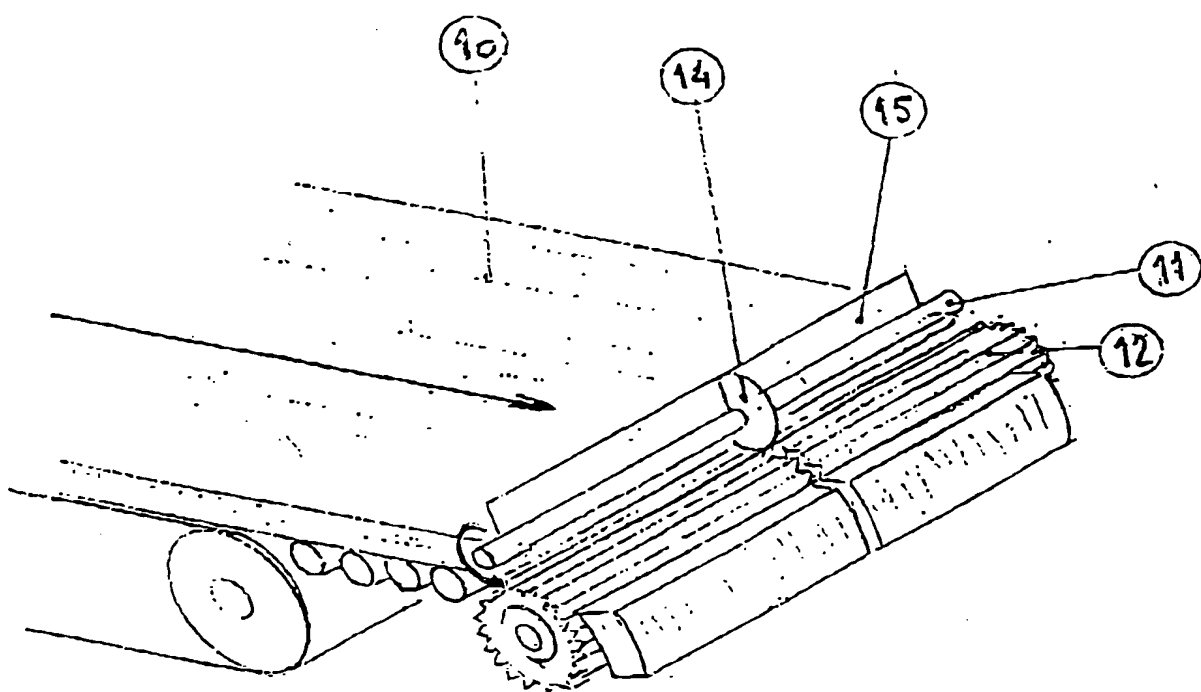


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FIGURE 5



Not good
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